

Abstract

A magnetorheological clutch consists of a stationary part (1), of a rotatable primary part (2) with primary lamellae (3) and of a secondary part (8) with secondary lamellae (17) which surrounds the primary part (2), there being formed between the primary part (2) and the secondary part (8) a space (28) which contains a magnetorheological fluid, a regulatable magnetic field acting on the magnetorheological fluid. In order to have as small a build as possible, to be capable of transmitting a maximum torque with minimum current and to be easily controllable, at least one magnet coil (21) is arranged in front of or behind the lamellae (4, 17) in the axial direction and loops around a first U-shaped yoke (20), the two end faces (26) of which are on the same side of the lamellae and parallel to these, at least one second yoke (22) is on the side of the lamellae which faces away from the first yoke (20), and the regions of the secondary part (8) which lie inside and outside the lamellae (4, 17) in the radial direction consist of a material of low magnetic permeability.

Drawing: Fig. 1